

ETS and hazard - the view from Seattle

May 18, 2007

John Vidale

with input from

Gomberg, Creager, Malone, Pratt, Houston, ...

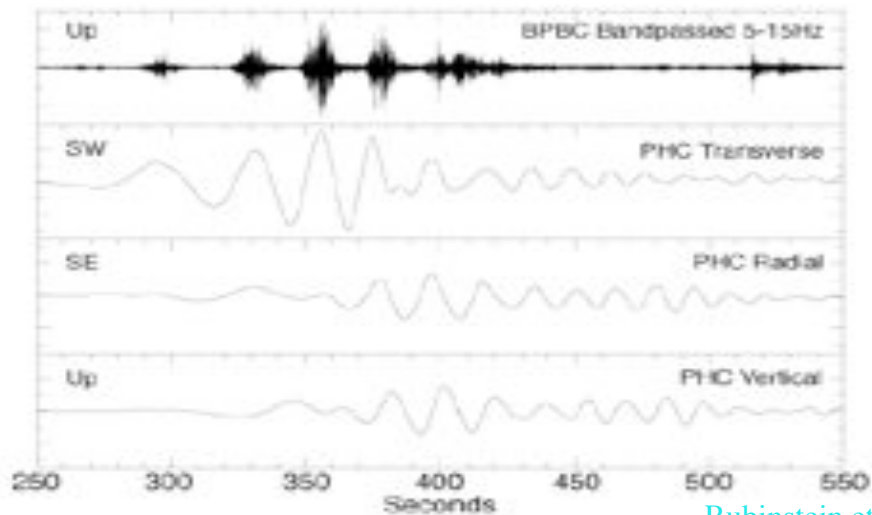


Topics



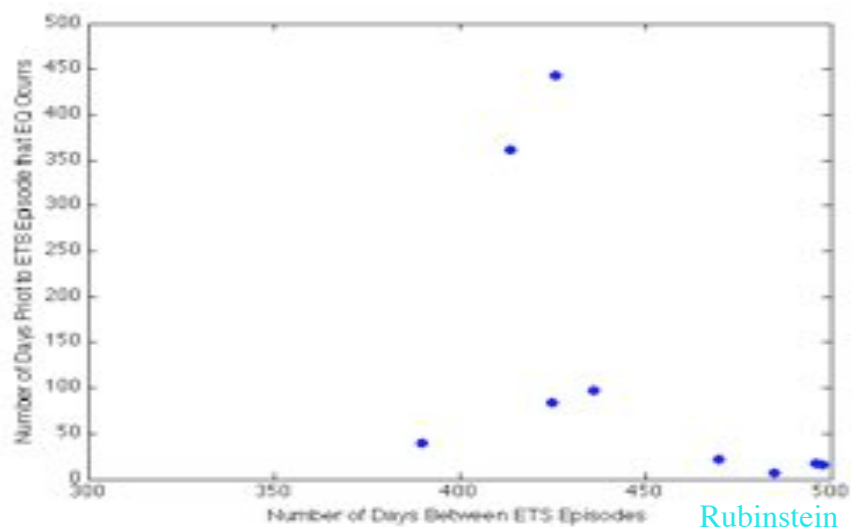
- How much does tremor shaking and stress encourage megathrust failure?
- What is the geometry of locked zone vs ETS?
- Network coverage is good and getting better

Stress drives tremor but does tremor ignite megathrust?



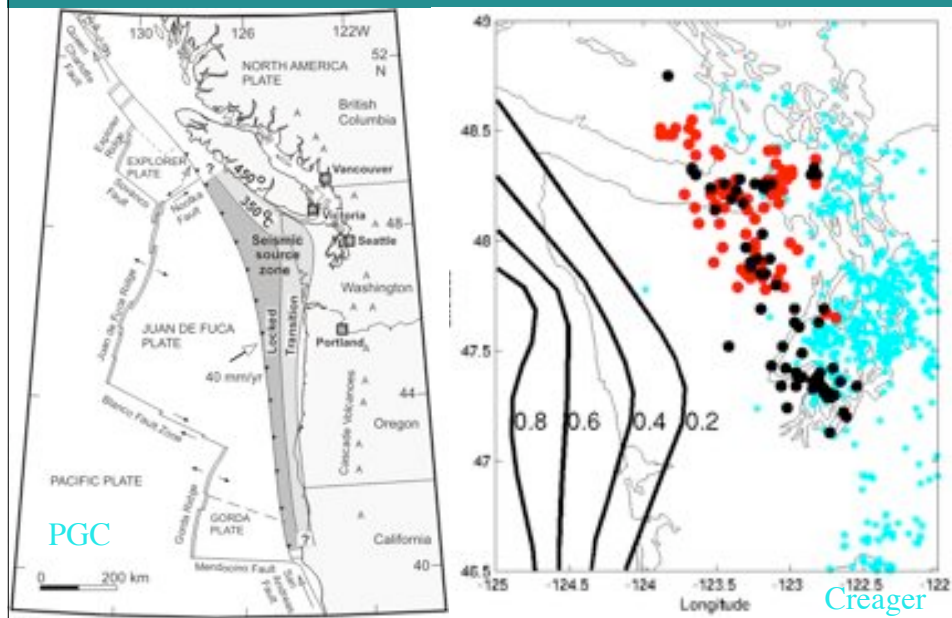
Rubinstein et al.

Maybe shaking ignites ETS (but does ETS ignite megathrust?)

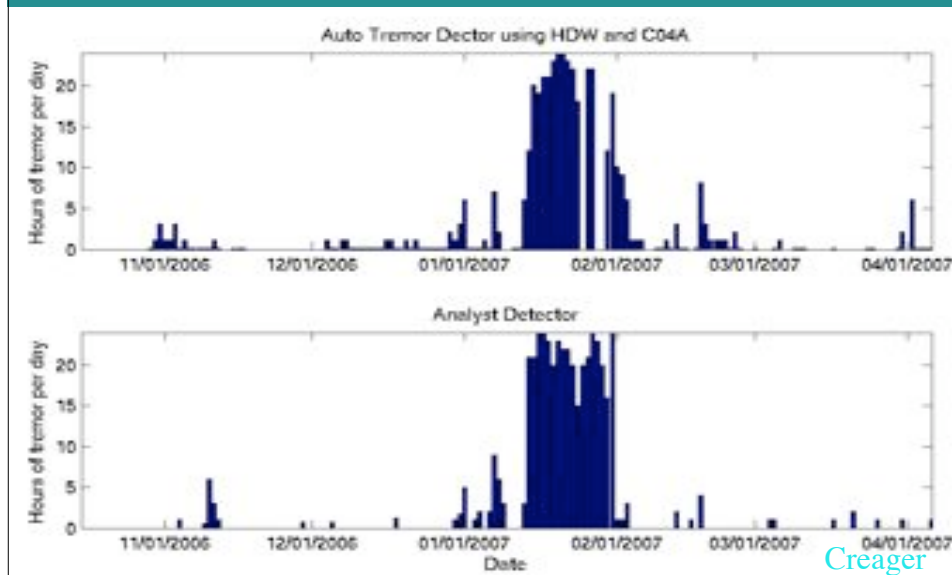


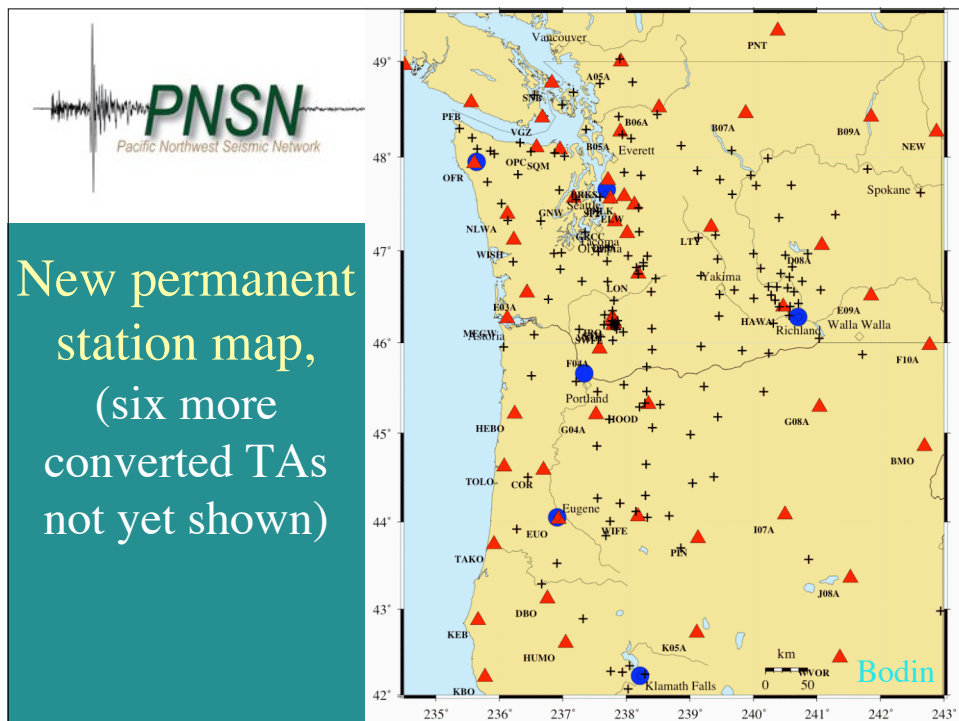
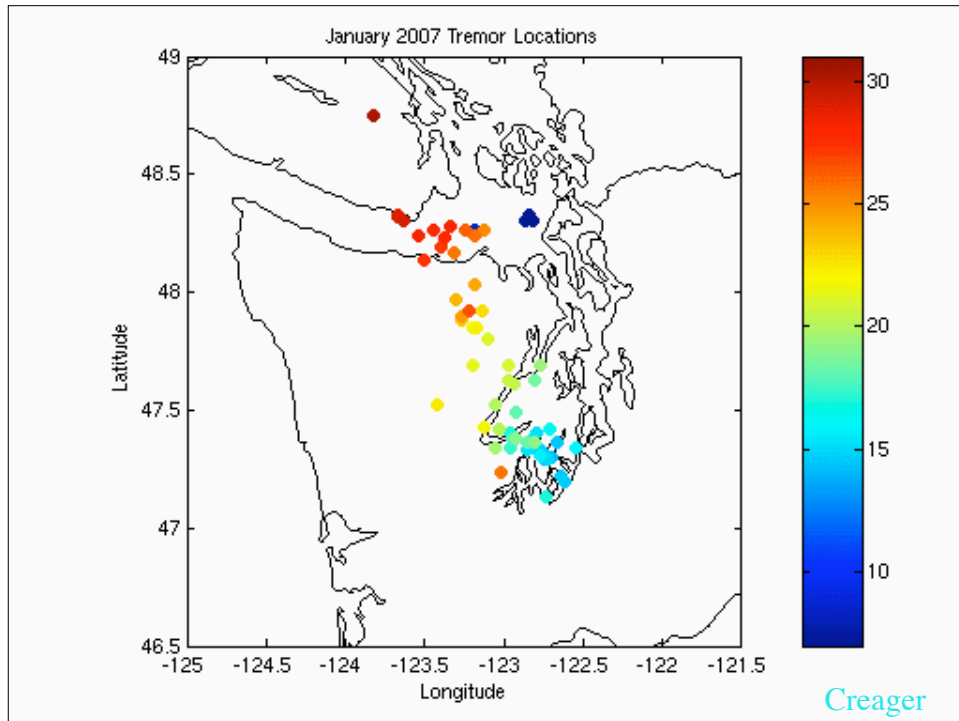
Rubinstein

Spatial relation of ETS-locking



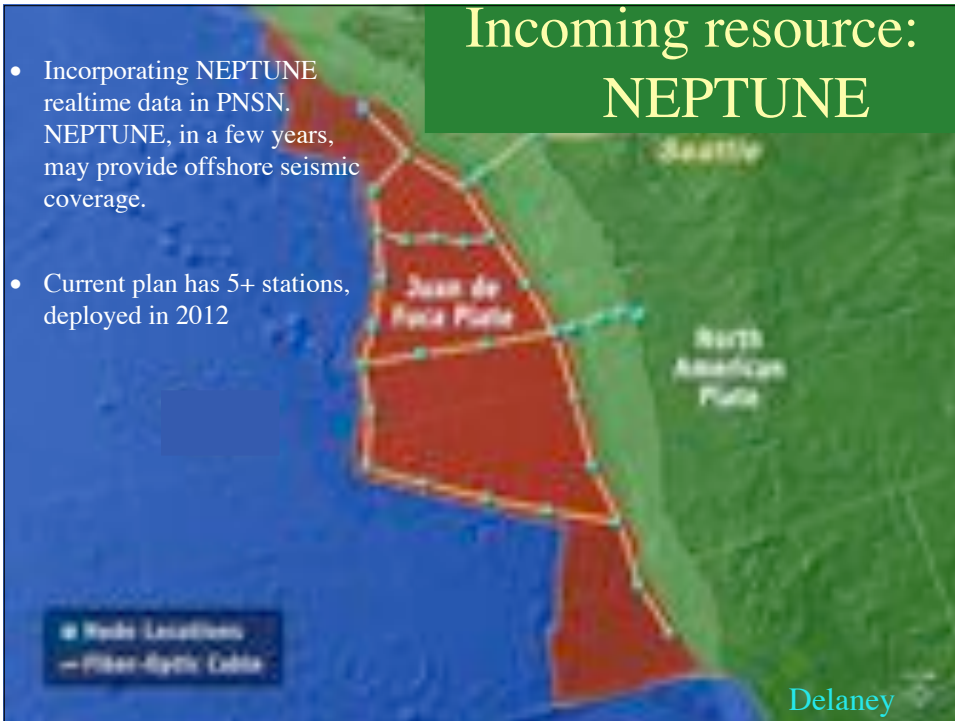
Ken's latest detection automation vs analyst -
Detection and location do not seem to be the problems





- Incorporating NEPTUNE realtime data in PNSN. NEPTUNE, in a few years, may provide offshore seismic coverage.
- Current plan has 5+ stations, deployed in 2012

Incoming resource: NEPTUNE



New GPS station map?

PANGA
CWU

Melbourne





Ways forward

- Public in PNW has displayed good sense in keeping science in perspective. Our job is getting #s.
- 1. (by a lot) Measure ETS correlation with subduction earthquakes globally.
- 2. Nail down location of ETS slip and locked zone.
- 3. Reconcile features of global episodic tremor and slip.
- 4. Find ETS Gutenberg-Richter distribution of magnitudes, determine moment scaling.



Naval Safety Center

